NOTES AND MEMORANDA.

PROFESSOR TUTTLE'S CAPITAL CONCEPT.

The rejoinder of Professor Tuttle in the November number of this journal[1] calls for a few words in reply. The situation, in brief, is this: The definition of capital which the present writer has advocated is, any *stock* of wealth existing at an *instant* of time, as distinct from a *flow* of wealth consumed or produced during a *period* of time. To this, Professor Tuttle and others objected that, while such a definition may be of service in economic analysis, it does not conform to previous usage. In the issue of this journal of May last[2] the writer replied to these criticisms,[3] and attempted to show (1) that the weight of precedent in the popular and business world, as shown by the work of lexicographers, has always been consistent with and in many cases identical with this definition; and (2) that among economists, on the other hand, there has not been sufficient agreement on any single conception to constitute precedents of importance. Professor Tuttle's conception of capital, "surplus wealth as a possession," was criticised, and the question was raised, What definite meaning was intended to be attached to the term "surplus"? The only indications Professor Tuttle had given were that by "surplus" wealth he meant what was left of the existing stock after deducting "what is required for the satisfaction of current wants."[4] The present writer

[1] "The Fundamental Notion of Capital Once More," *Quarterly Journal of Economics*, vol. xix. pp. 81–110.

[2] "Precedents for Defining Capital," *Ibid.*, vol. xviii. pp. 386–408.

[3] It is a satisfaction to note that the reply to Professor Fetter was accepted by him as harmonizing the views on capital held by him and by the present writer (see Fetter, *Principles of Economics*, p. 575). Another accession to the growing list of economists who give a general assent to the proposed capital-concept is Professor H. J. Davenport (see *Journal of Political Economy*, December, 1904, pp. 35, 46).

[4] *Quarterly Journal of Economics*, November, 1903, p. 78; see also pp. 60, 79.

pointed out that the satisfaction of "current" wants requires time, and that "current consumption" at the present moment must always be zero. Professor Tuttle now replies that by the "present" he does not mean the present instant, but a present period. If Professor Tuttle wishes to use the term "present" in such a sense, no objection is offered. No one will dispute that "present" is often used, and may properly be used, in the sense of the "present day," the "present year," or even the "present century."

But, if by the "present" is meant a period of time, this period itself needs to be carefully defined, both as to its length and its relation to the present instant. Professor Tuttle does not do this. His most explicit declaration reads, "That *unit of time* that serves as the basis of organization in the individual's economic life is what the writer conceives to be *the economic present*."[1] The vagueness of this explanation is not lessened when the author goes on to explain that this "present" "is not an absolute period, and, accordingly, its duration cannot be given as so many hours, or days, or weeks, or months. On the contrary, the period is wholly relative, and must be determined by each individual for himself."[2] On this basis the present writer has tried in vain to compute what his own "economic present" may be. How any one can do so does not appear clear. Nor do the directions which Professor Tuttle gives make it clearer:—

"Its duration depends largely on the individual's economic condition,—his mode of economic activity and the length of the production period, the conditions under which the work is done and the terms of payment, the scope of his mental grasp and the character of the industrial system to which he belongs. To Walker's primitive fishermen, accustomed to catch each day the fish for each day's need, the economic present was, perhaps, the day. Under a highly organized industrial system the results of production become available as income to the individual participants in the productive process only at intervals of varying length.

[1] *Quarterly Journal of Economics*, vol. xix. p. 85. [2] *Ibid.*, p. 87.

Though the stream of production is constant, the flow of income is intermittent. Many regard the interval between successive instalments of income as the economic present, whether it be the day, the week, the month, the quarter, or a period of any other length."

Thus, so far from explaining what the "unit of time that serves as the basis of organization in the individual's economic life" may mean, Professor Tuttle leaves its interpretation to each individual. It may be a day, three months, a year, or any other length of time, and depends in an unspecified manner on a number of undefined factors, such as "economic condition," "mode of economic activity," and "scope of his mental grasp."

Not only does Professor Tuttle leave indeterminate the duration of his "present," but, what is of far more consequence, he gives no consistent intimation of its relation to the present instant. He quotes Professor James's striking simile of the psychologist's present,—"The unit of composition of our perception of time is a duration, with a bow and a stern, as it were,—a rearward- and a forward-looking end." Professor James thus considers the "practically cognized present," or *present period*, as a boat floating down the stream of time, with the *present instant* perched as a passenger somewhere between the bow and the stern. But Professor Tuttle sometimes places his passenger at the bow and sometimes at the stern, while at other times he seems to anchor his boat and compel Present Instant to move from stern to bow, and then enter another stationary boat, and so on in endless succession. All of these conflicting ideas find a place in Professor Tuttle's article. Present Instant is evidently seated in the stern when we are told that, to find capital, we must subtract from a stock of wealth "that quantum which *is destined to be* consumed in the economic present,"[1] and also where he states, ". . . it at once becomes necessary to divide this fund of wealth into two parts, the one *to be devoted* to consumption pur-

[1] *Quarterly Journal of Economics*, vol. xix. p. 89. The italics are the present writer's, as in all other quotations except that from p. 85.

poses in the economic present, and the other, surplus wealth or capital,"[1] as well as elsewhere. On the other hand, Present Instant is evidently seated in the bow, with the whole of his "present period" behind him, in the following passage, among others:—

. . . "only that is surplus which remains *at the close* of that period, after the income of the period—present or current income—has all been received, and the expenditures of the period—present or current expenditures—have all been made. And this is capital. Whoever possesses a surplus has capital. Capital grows by the accumulation of surpluses."[2]

To this we can give unqualified assent. Professor Tuttle does not seem to be aware that, if Present Instant is taken at the *close* of Present Period, the "surplus" left, added to like surpluses of previous periods, constitutes the *whole* of the existing stock, and that his conception of capital then coincides with the present writer's. None of the consumption of the past is any deduction from the stock of wealth existing at the present instant. That stock is simply savings, or the combined "surplus" left over from the past for the future. In other words, if Present Instant be accorded a fixed position in the *bow* of his moving craft called Present Period, Professor Tuttle's "capital" turns out to be the "capital" of the present writer. Whether there is any *casus belli* between us depends entirely on where Professor Tuttle decides to locate Present Instant relatively to Present Period. Peace is still possible, provided he will consistently treat his "present," not as partly future, but as all *past*.

Finally, Professor Tuttle sometimes anchors his boat, and regards his present period, not as progressing with the present instant, but as fixed in the calendar year.[3] He instances the quarterly interval between dividend payments as being, sometimes at least, the "economic present." Such intervals are totally unlike Professor James's "cognized present," for they do not glide down the stream of

[1] *Quarterly Journal of Economics*, vol. xix. p. 106. [2] *Ibid.*, p. 89. [3] *Ibid.*, p. 87.

time, but are fixed in it. In this case Present Instant is, to change the simile, like a locomotive traversing successively a series of railway "blocks," each of which becomes the Present Period as soon as Present Instant enters it, and ceases so to be as soon as said Instant departs. If this be Professor Tuttle's meaning, it at least enables us to state that his "capital" coincides with the total stock at periodical intervals; namely, just as Present Instant is leaving Present Period. If each economic "block" is a calendar year, one's capital on December 31, 1904, is, correctly enough, his total stock. But, apparently, according to Professor Tuttle, on the next day, January 1, 1905, it is no longer the total stock, but that stock less the expected consumption of 1905. As the New Year's bells chime, his "capital" suddenly shrinks!

Aside from the question of the utility of such an oscillating "capital," we query how it is to be interpreted definitely where income accrues irregularly instead of regularly, where its instalments are of uncertain instead of certain amounts, and, lastly, how it is to be applied to the income of society as a whole. The "economic present" being, confessedly, a different period for different individuals, what is the "economic present" of society? And, if there be such a period, does it move forward in time with the Present Instant, or is it fixed and stationary,—*i.e.*, is it an anchored or a movable boat? Finally, is the passenger, Present Instant, to be accorded any fixed resting-place therein?

In view of such uncertainties it would seem that Professor Tuttle's argumentation, so far from raising objections to that conception of capital which is based on time relations, only supplies new evidence of the serious need, in economics, of recognizing and specifying clearly the fundamental relations between instants and periods of time.

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